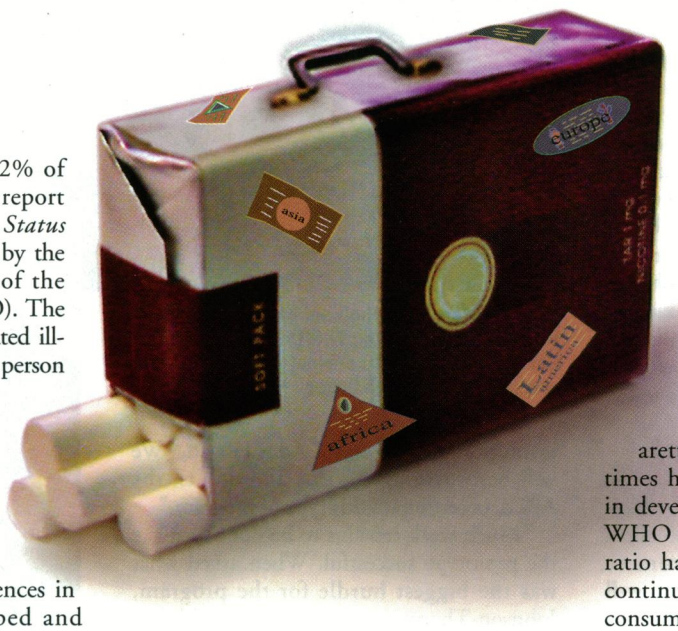
TOBACCO ABROAD:

INFILTRATING FOREIGN MARKETS



Worldwide, 47% of men and 12% of women smoke, according to the report *Tobacco or Health: First Global Status Report*, published in January 1996 by the Tobacco or Health Programme of the World Health Organization (WHO). The annual death toll from tobacco-related illness worldwide is 3 million, or one person every 10 seconds, a figure that is expected to rise to 10 million in the 2020s. Overall, half a billion members of the current world population will eventually die of tobacco-related illnesses, half of them in middle age.

But there are profound differences in smoking rates between developed and developing countries. "In your developed markets, men and women smoke equally, are at the height of disease burden, and [smoking] rates are going down," says Gregory N. Connolly, director of the Massachusetts Tobacco Control Program of the Massachusetts Department of Public Health. "In the developing world, unit consumption is low, and women don't smoke." During the period 1990–1992, average annual consumption in developing countries was 1,410 cigarettes per capita, compared to 2,590 in developed countries, according to the WHO report. Partly for this reason and partly because people in developing countries often die of other causes before smoking-related diseases can kill them, the number of deaths from smoking-related causes is nearly five-fold greater per smoker in the developed world than in the developing world. Richard Peto, professor of medical statistics and epidemiology at the ICRF Cancer Studies Unit of the Radcliffe Infirmary in Oxford and researcher Alan D. Lopez of the Tobacco or Health Programme of the WHO published these statistics in their 1994 book, *Mortality from Smoking in Developed Countries 1950–2000.*

However, a dramatic shift is taking place. In the developing world, incomes are rising, and smokers are smoking more, while nonsmokers—including women and younger men—are picking up the habit. At the same time, Westerners are renouncing nicotine in ever-growing numbers. "As smoking is decreasing [annually] in the West by 1.1%, it is increasing by 2.1% in developing countries," says Judith Mackay, executive director of the Asian Consultancy on Tobacco Control and professor at the Chinese Academy of Preventive Medicine in Beijing.

In the early 1970s, average cigarette consumption per adult was 3.3 times higher in developed countries than in developing countries, according to the WHO report. By the early 1990s, this ratio had decreased to 1.8. "If this trend continues," states the report, "per capita consumption in developing countries will exceed that of developed countries shortly after the turn of the century." Part of this increase is due to systematic efforts on the part of transnational tobacco companies (TTCs) to develop markets for tobacco products in developing countries. Says Mackay, "The tobacco companies . . . forecast growth in sales of 33% in Asia between 1991 and 2000."

The growth of world markets for tobacco products may have staggering consequences for health in developing countries. In China, for example, says John L. Bloom, manager of special projects at the National Center for Tobacco-Free Kids in Washington, DC, "You already have a country where the World Health Organization estimates that 50

million children alive today will die of tobacco-caused illness. Opening that market to U.S. brands and the additional competition, imagery, and marketing sophistication that the U.S. companies bring with them, we would expect to see 5 million more deaths among today's population of children in China." Bloom bases his comments on the results of an April 1996 study by Frank J. Chaloupka and Adit Laixuthai, entitled *U.S. Trade Policy and Cigarette Smoking in Asia, Working Paper 5543*, which stated that the introduction of U.S. cigarette companies into four Southeast Asian countries—Japan, Taiwan, South Korea, and Thailand—had raised the level of per capita cigarette smoking nearly 10% higher, on average beyond the level it would have reached had the companies stayed home. In addition, increases in smoking may have more dramatic impacts in developing countries, particularly on the health of children, because health consequences from smoking and exposure to passive cigarette smoke may be exacerbated by malnutrition and exposure to environmental toxins, common problems in many developing countries.

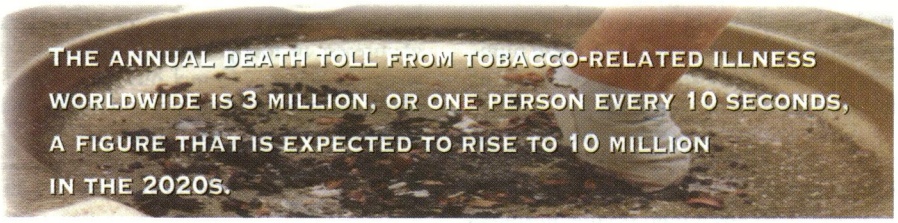
Snapshots from Abroad

China. China consumes more cigarettes than any other country in the world. To meet the demand from 300 million smokers, China boasts the largest cigarette manufacturing company in the world. Without venturing beyond China's borders, the state-owned China National Tobacco Corporation serves one-third of the global market, equal to the three largest multinational tobacco companies combined, according to the WHO. U.S. companies and the TTCs are entering the Chinese market through joint ventures with the China National Tobacco Corporation. In addition, large quantities of U.S. and TTC cigarettes are being smuggled into China. According to the WHO, imported cigarettes comprise 5% of the Chinese market.

From the early 1970s to the 1990s, smoking in China increased by 260% from 730 cigarettes smoked annually per capita to 1,900, according to the WHO. Tobacco-related illnesses may cause as many as 500,000 deaths annually in China, a figure that will rise to 2 million annually by 2025, Peto and Lopez report. Age-standardized death rates from lung cancer in 1995 were 56.8 per 100,000 for men and 23.5 for women, up from 49.3 and 20.6, respectively, in 1985–1989, says Mackay. These figures compare to 1993 statistics in the United States of 72.6 deaths per 100,000 for men and 33.5 for women.

Eastern Europe. Although China is the number one cigarette-consuming country, Poland claims the highest per capita use at 3,620 cigarettes per year; an increase from 3,010 in the early 1970s. Smoking among Polish men and women is fairly equal with one-third of women and one-half of men smoking. High smoking rates in Poland and throughout Eastern Europe are a legacy of the communist system, according to Eric LeGresley, legal counsel for the Nonsmokers' Rights Association in Ottawa, Ontario, who asserts that such governments "pacifie[d] the population by providing cheap cigarettes."

Smoking-related causes are now responsible for 18% of all deaths in Poland, according to Peto. Among males, the smoking-related death rate climbed fairly steadily from 9.3% of all deaths in 1955 to 34% in 1995, while in females it has gone from almost zero in 1955 to 7.2% today. Among those entering middle age (ages 35–69), 20% of men and 2% of women will die from smoking-related diseases. As in the United States, vascular diseases account for the greatest number of smoking-related deaths, followed by lung cancer, other cancers, and respiratory diseases.



The picture of smoking in the former Soviet Union as a whole looks very similar to that in Poland. Half of all male smokers and 25% of all female smokers entering middle age will die during middle age; 20% of these men and 2% of women will die from smoking-related causes, according to Peto. The number of smoking-related deaths among men entering middle age has more than quadrupled since 1955.

In general, Eastern Europeans are among the most avid smokers, a fact that is reflected in death rates. In the early 1990s, Hungarians were the number-three smokers in the world at 3,260 cigarettes per capita, according to the WHO; in the mid-1980s, the death rate from smoking-related illnesses in both Hungary and Poland was climbing steadily in both males and females even while deaths from other causes were declining slightly. For middle-aged men and women, the probabilities of dying from all causes and from smoking-related causes were almost identical to those in Poland and the former Soviet Union.

"Taken as a whole, the male risks of premature death from smoking tend to be greater in former socialist economies than in OECD [Organisation for Economic Co-operation and Development] developed countries," according to Peto. The OECD includes Western Europe, Canada, Australia, New Zealand, and the United States. For a 35-year-old man, the risk of dying of smoking-related causes by age 70 hovers around 20% in OECD countries, which is twice as high as in former socialist countries.

Southeast Asia. Currently in Southeast Asia, 44% of men and 4% of women smoke. Per capita consumption of cigarettes rose from 850 in the early 1970s to 1,230 in the early 1990s, according to the WHO. From the early 1970s to the early 1980s, cigarette consumption increased in eight countries of Southeast Asia. Of these countries, consumption increased over the next 10 years in Bangladesh, India, Indonesia, Myanmar, and Nepal, and decreased in Korea, Thailand, and Sri Lanka. The data on decreases must be taken with caution, however, because in Sri Lanka, *bidis* are widely smoked, but not accounted for. A *bidi* consists of a small amount of tobacco (0.2–0.3 grams) wrapped in a temburni leaf and tied with a small string. Despite *bidis* small size, their tar and carbon monoxide deliveries are similar to those of manufactured cigarettes. Also, because of smuggling, per capita adult consumption may be underestimated, according to the WHO.

"One of the biggest problems throughout much of Asia is that incomes are growing rapidly, so that areas with high prevalence but low consumption end up with high prevalence and high consumption," says David Sweanor, senior legal counsel for the Nonsmokers' Rights Association. "When South Korea was poor in the '50s and '60s, 60%–80% of males may have smoked, but only 1–2 cigarettes a day. Now [the country] has high consumption because people can afford two packs a day."

In Thailand, 49% of men smoke, but only 4% of women do. Annual per capita cigarette consumption was 810 in the early 1970s, but rose to 1,080 in the early 1980s, and has remained pretty stable,

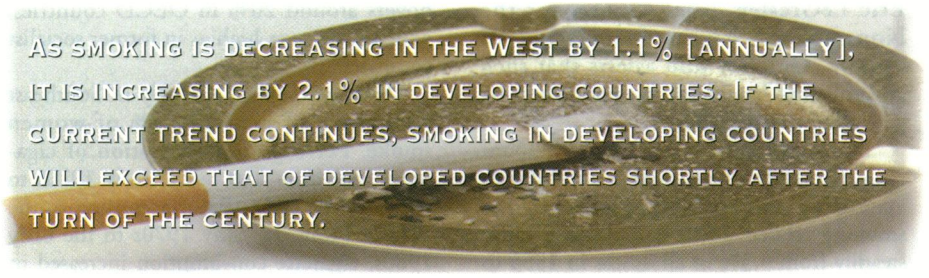
according to the WHO. In Korea, per capita consumption rose from 1,050 to 1,210 and then fell to 960 in the early 1980s.

Latin America. Smoking causes nearly 100,000 deaths annually in Central and Latin America and the Caribbean, according to *Smoking and Health in the Americas*, a 1992 report by then–U.S. Surgeon General Antonia Novella. These deaths include about 18,600 from chronic obstructive pulmonary disease, 18,500 from coronary heart disease, 17,000 from cerebrovascular disease, and 13,000 from lung cancer, according to the report. The median prevalence of smoking is 37% for men and 20% for women, but these numbers vary widely, rising in urban areas of the more-developed countries.

Annual per capita smoking in Venezuela, the smoking capitol of South America, has dropped slightly to 1,920. Colombia also saw a mild decline in smoking in the early 1970s from 1,880 cigarettes per capita to 1,750. During the same period, consumption in Argentina fell from 1,810 to 1,610. But in Mexico, consumption plummeted from 1,600 to 970. According to Philip L. Shepherd, associate professor of marketing and business environment at Florida International University, these declines are due in part to the Central and South American debt crisis. Shepherd, who spent three and a half years as a flue-cured tobacco extensionist in the Peace Corps, and then worked closely with the national cigarette companies in Colombia and Peru, said, "A lot of smoking at the lower end of the scale is driven by income. When the debt crisis and income crash came, that meant the loss of the Latin American cigarette market."

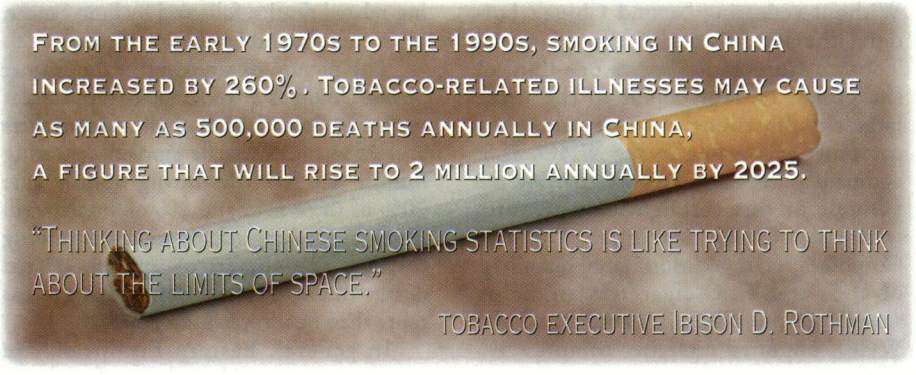
Nonetheless, while per capita smoking rates in Latin America are falling, prevalence is still rising, according to the Surgeon General's report, and what growth there has been is so recent that the full impact of smoking on mortality remains to be felt.

Africa. In Africa, widespread abject poverty keeps per capita consumption much lower than in the rest of the world. Annual per capita consumption in Kenya is 500 cigarettes and has changed little over 20 years. The WHO estimates prevalence for the continent to be about 25% for men and 1% for women, but advises that the data on Africa "are based on very limited information, and should be used with great caution."



A Foot in the Door

What surprises Shepherd is the length of time it took U.S. cigarette companies to invade the markets abroad. A 1955 comment attributed to Bowman Gray, former president of R.J. Reynolds Tobacco Company (RJR), illustrates an earlier lack of interest in foreign tobacco markets: "if anybody wants a Camel out there someplace, let them call us up and we'll send some over." Now, such provincialism is dead, and U.S. companies and TTCs are marketing aggressively all over the world.



The lure of foreign markets is now very strong. "Thinking about Chinese smoking statistics is like trying to think about the limits of space," said tobacco executive Ibison D. Rothman of the Rothman International tobacco company in the 16 October 1992 issue of *Window*, a weekly magazine in Hong Kong.

The typical strategy for gaining access to a protected market "is to enter into a series of manufacturing agreements with the national company," Connolly wrote in the 1992 *Journal of the National Cancer Institute, Monograph #12*. "This foot-in-the-door approach was tolerated by local policy makers because local leaf was used and cigarettes were produced by the national company."

In exchange for trade agreements, the TTCs gave advanced agricultural and manufacturing technology to the local company. Says Connolly, "At the same time, the TTCs pushed the local governments to denationalize the state tobacco monopoly. This . . . set the stage for future acquisition."

In Eastern Europe as of 1995, TTCs had purchased more than 30 formerly state-owned companies outright. The rapid penetration into Eastern Europe can be seen in RJR Nabisco's (formerly R.J. Reynolds Tobacco Company) international sales, says Connolly. "Prior to market opening, RJR reported little cigarette sales in the region. By 1993, RJR reported that 23% of all international cigarettes sold were in Eastern Europe, more than in Asia (18%) or the Middle East and Africa (18%)."

On 16 August 1993, Philip Morris International and the China National Tobacco Corporation announced they would produce and sell Marlboro cigarettes for the Chinese market, as well as develop and produce other brands for domestic and export sales. RJR and Rothmans have also established joint ventures with the China National Tobacco Corporation.

Selling Abroad

TTCs often advertise even before they crack a market. In Thailand, by common practice, "[TTCs] actually took out billboard advertisements for brands that were illegal to sell," alleges *Resisting Tobacco in Developing Countries*, a set of working papers written for the 8th World Conference on Tobacco or Health: Building a Tobacco-Free World, held in Buenos Aires, Argentina on 30 March–3 April 1992.

Many countries, including China, Thailand, France, and Poland, ban or limit tobacco product advertising, and anti-smoking activists accuse tobacco companies of using a variety of creative tactics to sidestep these bans. The cartoon character Joe Camel was created to circumvent French bans on the use of live models "who associated the brand with vitality, sexuality, and health," says Karen Lewis, deputy director for tobacco projects at The Advocacy Institute in Washington, DC. RJR's Adam Bryan-Brown, director of external relations for R.J. Reynolds International, based in Geneva, Switzerland, confirms that Joe Camel was first drawn for a French campaign in 1974 but professes ignorance of the precise circumstances surrounding the campaign.

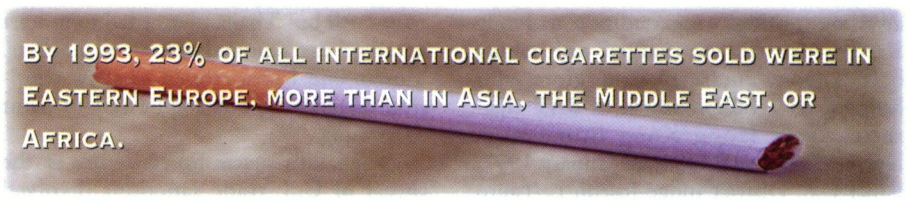
Although tobacco product advertising is now banned in France, there is "a little Formula One children's ride in Paris, with cigarette stickers on [the cars], one Marlboro, one Winston," says Ronald Davis, director of the Center for Health Promotion and Disease Prevention at the Henry Ford Health System in Detroit, Michigan. Additionally, French stores sell Camel brand clothes.

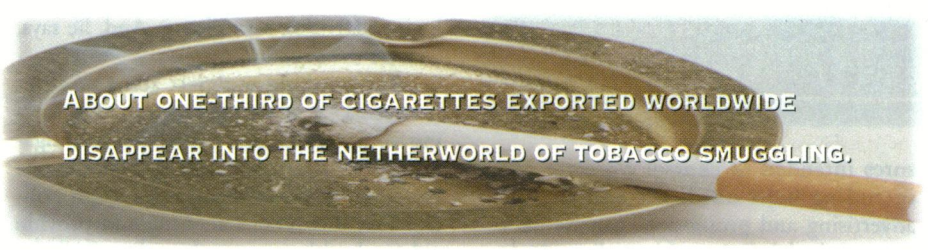
Bryan-Brown confirms the existence of Camel clothes, as well as bags, trophy watches, and other premium-priced fashion accessories, but asserts that brand diversification is a normal practice in many industries. "We now have [such items] in Asia, as well as Marlboro Classics Shops," says Mackay.

All over the world, TTCs fight bans aggressively, often arguing that "they deny freedom of speech and result in lost advertising revenue," says LeGresley. "All this is premised on a few assumptions the industry doesn't want to test. They assume freedom of expression applies to corporations. It is very clear from international law that it does not," he says, citing the International Covenant on Civil and Political Rights, a 1966 United Nations treaty on fundamental human rights, which says that freedom of expression applies irrespective of such factors as race, religion, and place of birth—all qualities that do not apply to corporations.

As much as possible, tobacco companies confine their efforts to influence tobacco regulations to foreign political forums, where all they have to do "is convince a few skittish [politicians] of their point of view," says LeGresley. And, when it comes to commenting on proposed regulation, they wait until the end, or even past the end, of the comment period and then snow the authorities with reams of briefs, says LeGresley, citing examples in Canada and South Africa.

Ironically, one factor that is fueling exportation of tobacco to developing countries is the increasing limitations placed on the domestic marketing of tobacco products by the U.S. government in an effort to inhibit sales, particularly to children. On 23 August 1996, President Clinton approved a set of rules established by the U.S. Food and Drug Administration that are designed to reduce teenagers' tobacco consumption by 50%. The rules include prohibitions on distributing free samples of cigarettes, selling and distributing free clothing with tobacco product brand names or logos, and using brand name, but not corporate name, in sponsorship of sports and entertainment events; a ban on outdoor advertising within 1,000 feet of schools and playgrounds; and a rule that will limit advertising to black and white, and text-only in publications with audiences that include more than 15% (or 2 million) readers under age 18. In a separate rule, the FDA will require six tobacco companies that sell significant quantities to juveniles to educate youth concerning the health dangers associated with tobacco use.





Smuggling

Some observers allege that the TTCs do not confine themselves to direct and public methods of infiltrating markets such as cooperative agreements and advertising. About one-third of cigarettes exported worldwide "disappear" into the netherworld of tobacco smuggling, says Sweanor. That total, he says, is simply too high to allow for some other explanation other than the companies themselves being involved. Says Sweanor, "If IBM said, 'We exported three million computers and know where two million are,' they'd be laughed at."

Shepherd says that company-involved smuggling of cigarettes occurred in Latin America in the late 1960s and the 1970s, when U.S. companies could not compete with the local brands because U.S. cigarettes were not accepted by South Americans, who smoked darker, stronger tobacco. In addition, tariffs on U.S. cigarettes of up to 140% helped to discourage sales. Cigarette companies set up smuggling networks to overcome the price barrier, says Shepherd, who worked with local Colombian cigarette companies to address this invasion of their markets. "The smuggling networks were incredibly effective, and [in many parts of South America] local companies withered quickly and were bought up," he said. High taxes, says Bryan-Brown, fuel the current demand for smuggling. Economics professor Jagdish Bhagwati of Columbia University agrees. "Any time you use a high price or a restrictive measure, smuggling is going to break out. It doesn't have to be done by the companies themselves."

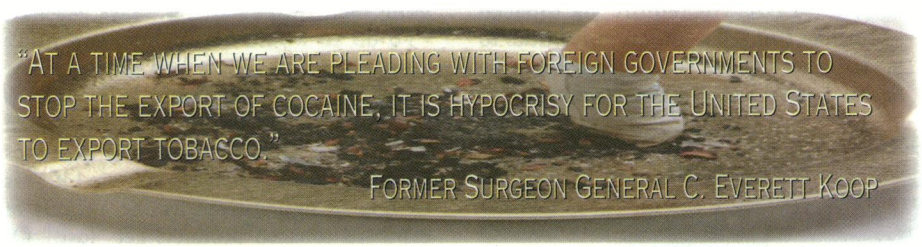
"No one has actually yet dared accuse the tobacco companies directly of smuggling their own cigarettes," says Mackay. "To do so would be libelous and quite dangerous unless you had any absolute proof." But Mackay cites a 1995 analysis for tobacco company investors performed by NatWest Securities that raises questions about how such a massive volume [30% is the global figure given by the WHO] of exported tobacco products get "lost." Of British American Tobacco (BAT), the parent company of the United States' Brown & Williamson Tobacco Corporation (B&W) and the only TTC lacking a legal presence in China, the report said, ". . . Legal imports [into China] have effectively been restricted. However, since BAT's cigarettes reach the Chinese market through informal channels, mostly from Hong Kong, this has had little effect on actual volumes." And in an 18 December 1996 article, *The Wall Street Journal* claimed to have learned from three former BAT exec-

utives that "BAT's Hong Kong subsidiary held weekly meetings at which smuggling activities were discussed, down to specific boats, inlets, and villages involved," and that "such information was kept from the most senior BAT officials who visited Asia from London to allow them deniability." BAT denied the charges to the paper.

Two recent legal cases raise further questions about cigarette companies' roles in smuggling. Lui Kin-Hong (a.k.a. Jerry Lui), a former export manager for B&W, was jailed in Massachusetts in 1995 while awaiting hearings on extradition to Hong Kong, where he was charged with taking bribes from cigarette smugglers who brought $1.2 billion worth of BAT cigarettes from Hong Kong into China between 1984 and 1993. In January 1997, Chief U.S. District Judge Joseph L. Tauro ruled that Lui's extradition to Hong Kong would be tantamount to extradition to China because of the pending return of Hong Kong to China's rule. Because the United States has no extradition agreement with China, Lui was freed.

In May 1996, B&W's East Coast regional manager, Michael Bernstein, and a former B&W employee were indicted on one count of assisting the smuggling of contraband cigarettes from the United States into Canada. "I don't know that the company is orchestrating [smuggling], but if there are many instances like this, and the company is looking the other way, well then we've got another set of circumstances," Eddie J. Jordan, Jr., U.S. Attorney for the Eastern District of Louisiana, told the *Boston Globe* after handing down the indictments.

BAT refused to comment to *EHP* on this topic. Bryan-Brown asserts, however, that "we don't smuggle, and we don't support smuggling." But, he adds, "Smuggling is a fact of life, not just of cigarettes but of many consumer products."



Trade Policy Versus Health Policy

"Another strategy [used] to pry open closed markets is the use of retaliatory trade threats by the U.S. government," according to Connolly. For example, in three separate incidents in the latter half of the 1980s, at the request of the now-defunct U.S. Cigarette Export Association, U.S. Trade Representative Clayton Yeutter threatened sanctions under Section 301 of the 1974 Trade Act on exports to the United States from Taiwan, Thailand, Korea, and Japan unless these countries permitted U.S. cigarette companies free access to their markets. This came after the companies complained of quotas, tariffs, and constraints on advertising and marketing. Yeutter also pressured Korea and Taiwan to allow television cigarette advertising, which is prohibited in the United States. All but Thailand acceded to at least some of the demands to open markets. Taiwan and Korea refused to allow television advertising but acquiesced to print advertising.

Thailand's successful resistance to the threat of U.S. trade sanctions involved grassroots activity among activists in both Thailand and the United States, culminating in a public hearing at which former Surgeon General C. Everett Koop lambasted the U.S. government, saying, " . . . At a time when we are pleading with foreign governments to stop the export of cocaine, it is hypocrisy for the United States to export tobacco."

In December 1989, under mounting public pressure, Yeutter referred the matter to the Geneva-based panel in charge of resolving conflicts involving the General Agreement on Trade and Tariffs (GATT), which governs much of international trade. In the fall of 1990, the panel ruled that "smoking constituted a serious risk to human health and consequently measures designed to reduce the consumption of cigarettes fell within the scope of Article XX(b) [of the treaty]" as necessary to protect health. GATT allows a variety of measures intended to control cigarette sales including bans on direct and indirect advertising and promotion, generic packaging, strict labeling, and ingredient disclosure, as long as they applied to both domestic and foreign brands.

In letters dated from 1995, David R. Moran, economic counselor in the U.S. Embassy to Thailand, along with his counterparts Taro Ishibashi of Japan and Richard Fell of the United Kingdom, tried to pressure Varabhorn Bhumiswadi, director of the Thai Institute for Tobacco Consumption Control, to meet with tobacco company executives in an effort to quash a requirement for disclosure of cigarette ingredients, a measure that was permitted under GATT.

Early in the Clinton administration, a joint task force was formed between the Department of Commerce and the Department of Health and Human Services to examine tobacco trade policies. "This review has resulted in an approach based on the belief that the U.S. government should not object when a foreign government takes legitimate health measures to protect the health of its citizens," says an administration official who refused to be identified. But, the official said, restrictions on trade that "arbitrarily discriminate against the U.S." should be addressed.

Michael Eriksen, director of the the U.S. Center for Disease Control and Prevention's Office on Smoking and Health, was asked last year to sit in on tobacco trade negotiations with some Asian countries, a first. Says Eriksen, "I've participated in trade negotiations with both Taiwan and South Korea. In both instances, there has been a fair hearing of both the health concerns about tobacco as well as the trade concerns about possible discrimination against U.S. products. My understanding is that it has been a large improvement over the situation in the mid-1980s when [measures] were being used to force advertising on countries that previously had bans on it. . . . The strategy going in was to support South Korea's proposals for tobacco control efforts as long as they were applied in a nondiscriminatory manner toward U.S. cigarettes."

Historically, the United States and other tobacco producing and exporting nations have pressured the WHO and other multilateral health agencies to let the TTCs continue their advertising and marketing activities, says Bloom. And, he says, "That's the situation today."

Antismoking activists see a conflict between U.S. trade policies aimed at forcing countries to ease restrictions on cigarette advertising and marketing on the one hand, and U.S. domestic and foreign policies that discourage smoking and provide aid for health care on the other. "All the projections we've seen suggest that all of the good the United States has done in addressing other epidemics, from TB to malaria, and on and on, could be undone through the growing worldwide epidemic of tobacco use," says Bloom.

Money matters are proprietary at Philip Morris International, but last year

the state-run *China Daily* reported that revenues from cigarette industry activities in China alone equaled $3.6 billion, less than half of the $7.8 billion in costs resulting from medical care for tobacco-related illnesses, lost labor due to deaths, and lost productivity.

But at a recent meeting of the Asia Pacific Association for the Control of Tobacco, Jin Shuigao of the Chinese Academy of Preventive Medicine placed the direct costs of smoking in China at $1.85 billion for 1993, considerably less than the revenues the *China Daily* reported. Direct costs included direct medical costs and costs for fires resulting from smoking, but excluded the cost of lost labor due to premature deaths.

Still, the fact remains that the United States' foreign policies are simultaneously promoting and discouraging tobacco product use in developing countries, and the amount of money being spent to promote tobacco is exponentially greater than the amount spent to discourage, not to mention the amount spent in foreign aid for health care, including that spent on tobacco-related illnesses.

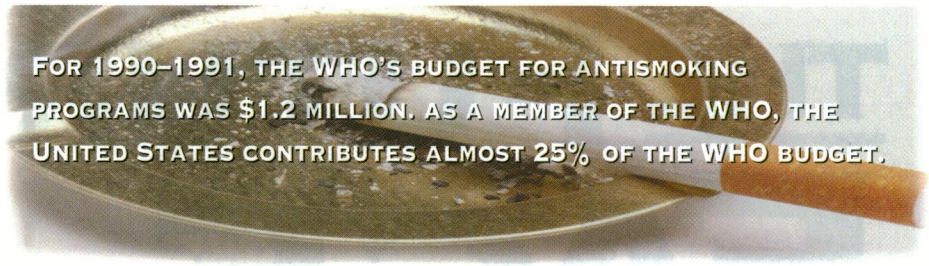
For example, as a member of the WHO, the United States contributes almost 25% of the WHO budget, according to the U.S. Government Accounting Office. Some of that money goes to fund the WHO's global program to discourage tobacco use and bring greater awareness of the health consequences of smoking. For 1990–1991, the WHO's budget for antismoking programs was $1.2 million.

In addition, the CDC has a cooperative agreement with the WHO that provides funds for a number of programs including health communication. The CDC's Office on Smoking and Health is the international collaborative center on tobacco for the WHO, according to Steven Watson. The CDC is also working with the Pan American Health Organization on this issue.

According to press officer Leah Levin, the United States Agency for International Development spends more than $600 million for health programs internationally, including child survival activities, maternal health, disease education and prevention, and more general health activities. However, she said, "I don't believe any of that is targeted toward antismoking activities."

Extinguishing Cigarettes

Meanwhile, many developing and developed countries have instituted a wide variety of policies to discourage smoking. One of the most authoritative sources on the matter may be *World Tobacco File*, the definitive market report for the world tobacco industry. According to *World Tobacco File*, the most powerful damper on smoking in both the developed and the developing world is the cigarette tax.



In 1990, the United Kingdom began raising taxes by a minimum of 3% above inflation annually, and since then, per capita consumption has fallen by 20%. A tax increase that raised the cost of tobacco by 50% in New Zealand resulted in a 20% decline in consumption during the following two years.

"Studies have shown that for every 10% increase in the price of cigarettes, there is a 4% decrease in sales," says Davis. Some studies show a significantly higher price elasticity (the economic term for the change in consumption with price) for teenagers and for those of low socioeconomic status.

In Canada, tax-related price hikes of over 150% "coincided with a decline in per capita consumption which was about 40% among kids," says Sweanor. Kids aren't deciding not to smoke, but rather are trading off between cigarettes and other items they want, he says.

In the developed world, antismoking legislation regarding packaging and public smoking restrictions is the second most powerful measure after taxes, according to *World Tobacco File*. Advertising and marketing restrictions are third most important out of a total of seven measures. But in developing countries, such measures rank fifth.

Nonetheless, observers disagree as to the impact of bans on advertising. A study by advertising consultant Michael Stewart of tobacco consumption in 22 countries of the OECD, published in the *International Journal of Advertising* in 1993, found a small increase in tobacco consumption following advertising bans. Said Stewart, "This increase is not quite statistically significant, but [it] clearly refutes the belief that advertising bans have appreciably reduced consumption." By 1990, 6 of the 22 countries in the study had implemented bans. In a 1996 literature review in the *International Journal of Advertising*, Martyn Duffy of the University of Manchester found that "the weight of the evidence . . . does not give much support, if any, to those who believe that advertising bans are an effective means of reducing consumption." But, counters David, "Advertising bans are extremely important because of their effects on kids . . . [Advertisements] contribute to the notion that smoking is socially acceptable."

If the impact of advertising and advertising bans upon smoking is in dispute, the political and economic influence of the companies themselves, backed by U.S. trade policy, is not. This finding, according to Stewart's report, is consistent with the expectation that increased competition in these markets would lower cigarette prices. It is also consistent with anecdotal evidence suggesting that the multimillion-dollar marketing campaigns of U.S. cigarette companies have increased consumption. "Given the substantial health consequences of cigarette smoking," stated the report, "one likely consequence of this liberalization of trade is an increase in the morbidity and mortality associated with cigarette smoking in these countries."

In the past, low incomes and state cigarette monopolies that produced less flavorful cigarettes using harsher local leaf limited the demand for tobacco in developing countries. And, wrote Connolly, "In the absence of competition, there is generally no cigarette advertising . . . [and] these marketing inefficiencies may have the unintended public health benefit of curbing smoking." All that is changing.

U.S. cigarette companies and TTCs are enticing nonsmokers in developing countries with modern advertising and a product that is milder, smoother, and more generally attractive than the indigenous fare, while rising incomes are allowing smokers to indulge their habits. The result, according to Peto, is that in the next century, the developing world will overtake developed countries in the number of smoking-related deaths.

David Holzman